

We claim:

1. A process for preparing mono- or diesters of
5 polytetrahydrofuran or of tetrahydrofuran copolymers by
polymerizing tetrahydrofuran in the presence of at least one
telogen and/or of a comonomer over an acidic catalyst,
wherein the polymerization reactor is started up using a
10 mixture of polytetrahydrofuran, the mono- or diesters of
polytetrahydrofuran and/or of the tetrahydrofuran copolymers,
tetrahydrofuran, any comonomer and at least one carboxylic
acid and/or one carboxylic anhydride.
2. A process as claimed in claim 1, wherein the mono- or
15 diesters of polytetrahydrofuran or of the tetrahydrofuran
copolymers or the polytetrahydrofuran used for startup have
an average molecular weight M_n of from 650 to 4000.
3. A process as claimed in claim 1 or 2, wherein the
20 concentration of the polymer used for startup is from 20 to
80% by weight, based on the total amount of the mixture used
for startup.
4. A process as claimed in any of claims 1 to 3, wherein the
25 mixture used for startup comprises from 7 to 80% by weight of
tetrahydrofuran or the total amount of tetrahydrofuran and
comonomer, based on the total amount of the mixture used for
startup.
- 30 5. A process as claimed in any of claims 1 to 4, wherein from
0.5 to 10% by weight of carboxylic anhydride are used for
startup, based on the entire amount of the mixture used for
startup.
- 35 6. A process as claimed in any of claims 1 to 5, wherein acetic
anhydride is used.
7. A process as claimed in any of claims 1 to 6, wherein, in
addition to the carboxylic anhydride, up to 3% by weight,
40 based on the total amount of the mixture used for startup, of
carboxylic acid are used.
8. A process as claimed in any of claims 1 to 7, wherein an
inert solvent is added to the mixture used for starting up
45 the polymerization reactor.

We claim:

1. A process for preparing mono- or diesters of
5 polytetrahydrofuran or of tetrahydrofuran copolymers by polymerizing tetrahydrofuran in the presence of at least one telogen and/or of a comonomer over an acidic catalyst, wherein the polymerization reactor is started up using a mixture of the polymer to be prepared by the process,
10 polytetrahydrofuran, the mono- or diesters of polytetrahydrofuran and/or of the tetrahydrofuran copolymers, tetrahydrofuran, any comonomer and at least one carboxylic anhydride.
- 15 2. A process as claimed in claim 1, wherein the mono- or diesters of polytetrahydrofuran or of the tetrahydrofuran copolymers or the polytetrahydrofuran used for startup have an average molecular weight M_n of from 650 to 4000.
- 20 3. A process as claimed in claim 1 or 2, wherein the concentration of the polymer used for startup is from 20 to 80% by weight, based on the total amount of the mixture used for startup.
- 25 4. A process as claimed in any of claims 1 to 3, wherein the mixture used for startup comprises from 7 to 80% by weight of tetrahydrofuran or the total amount of tetrahydrofuran and comonomer, based on the total amount of the mixture used for startup.
- 30 5. A process as claimed in any of claims 1 to 4, wherein from 0.5 to 10% by weight of carboxylic anhydride are used for startup, based on the entire amount of the mixture used for startup.
- 35 6. A process as claimed in any of claims 1 to 5, wherein acetic anhydride is used.
7. A process as claimed in any of claims 1 to 6, wherein, in
40 addition to the carboxylic anhydride, up to 3% by weight, based on the total amount of the mixture used for startup, of carboxylic acid are used.
- 45 8. A process as claimed in any of claims 1 to 7, wherein an inert solvent is added to the mixture used for starting up the polymerization reactor.

Preparation of mono- and diesters of polytetrahydrofuran and of tetrahydrofuran copolymers

5 Abstract

The present invention provides a process for preparing mono- or diesters of polytetrahydrofuran or of tetrahydrofuran copolymers by polymerizing tetrahydrofuran in the presence of at least one 10 telogen and/or of a comonomer over an acidic catalyst, wherein the polymerization reactor is started up using a mixture of polytetrahydrofuran, the mono- or diesters of polytetrahydrofuran and/or of the THF copolymers, tetrahydrofuran, any comonomer and at least one carboxylic acid and/or one carboxylic anhydride.

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